pp. 365 & 366 were reckoned for the t.p. which was inserted here

INDEX.

NOTE.—The numbers following the titles of articles are the pages of this volume. Those in parenthesis are the numbers of the Minor Planets.

A

Analytic Geometry, Elements of..... 48
Astronomy and the Ice Age....57, 117, 193
Astronomical Observations at Dresde. 195
Anuario for 1887, from Tacubaya, Mexico..... 220
American Astronomical Society..... 225
Astronomical Congress at Paris..... 227
Astronomical Photography..... 229
Astronomy in Recent Periodicals..... 281
Ann Arbor Observatory..... 324
Appel, D..... 362

B

Book Notices 47, 166, 231, 364
Byrd, Miss Mary E.....79, 151, 319
Brooks' Comet No. 3, 1886..... 86
Barnard, E. E.....58, 115, 161, 222, 326
Bigelow, Frank H.....139, 170, 321
Boyden Fund, H. C. Observatory..... 163
Brightness and Masses of Binary Stars. 165
Brass Micrometer Screws..... 229
Burckhalter, C..... 291
Brashear's Work Shop 318
Bright Meteor 321

C

Comet of Finlay 42, 221
Colbert, Prof. E.....43, 44, 49, 85
Clevenger, S. V..... 89
Comets of 1886.....112, 201
Comet *a* 1887, by Thome..... 113
Comet *b* 1887, Discovery by Brooks.... 113
Comet *b* 1887, Boss' Elements and Ephemeris..... 114
Comet *c* 1887, (Barnard) Discovery..... 114
Comet *c* 1887, Ephemeris by H.V.Egbert 115
Comet *c* 1887, Elements by F.H.Bigelow 321
Comets Chiefly Optical Phenomena... 120
Comets DeVico 1844 I, and Finlay 1886 V 121
Catalogue of 130 Polar Stars..... 157
Comet *d* 1887 (Barnard) Feb. 16, Discovery 161
Comet *d* 1887 (Barnard) Orbit.....161, 222
Campbell, F. M..... 163
Common's Photograph of Orion..... 165
Corrigan, S. J..... 175
Charlier's General Disturbance of Thetis by Jupiter..... 199
Comet *e* 1887, Barnard's Elements of.. 220
Characteristic Curves of Composition. 224
Computation of Final Orbits of Several Comets..... 227
Clerke, Miss Agnes M..... 254
Colors in the Solar Corona..... 273
Comet *f* 1887 (Brooks) Discovery..... 289
Comet *f* (Brooks) Elements by H. V. Egbert..... 289
Comet *f* (Brooks) Ephemeris by H. V. Egbert.....289, 294
Corrigenda in Various Star Catalogues 296
Comstock, Geo. C..... 310
Carleton College Observatory..... 319
Corrections to Warner Obs'y Catalogue VI of New Nebulæ..... 323
Comet Olbers, Elements and Ephem.. 327
Comet-Meteor Radiants..... 359
Catalogue of Red Stars..... 363
Chauvenet's Elementary Astronomy.. 364

D

Davidson, Geo.....47, 162, 195
Dearborn Observatory.....81, 324, 325
Distribution of the Minor Planets..... 116
Denning, W. F.....160, 289, 357
Davidson G. F..... 162
Daylight Occultation of *a* Tauri..... 194
Double Meteor..... 322
Duner, N. C..... 359

E

Errata.....88, 156, 160
Ennis, Jacob.....105, 281
Elements of Geometry, Wells..... 166
Eccentricities and Inclinations of the Asteroidal Orbits..... 169
Elementary Treatise on Determinants (Peck's)..... 231
Electricity and its Discoveries..... 232
Eadie, J. H..... 322
Egbert, H. V..... 328

F

Flamsteed's Stars "Observed but not Existing" 319
Forum for Sept., Important Articles... 323

G

Geodesy, Elements of 48
General List of Observatories..... 200
Great Southern Comet..... 226
General Bibliography of Astronomy... 327

H

Harkness, Prof. Wm..... 329
Holden, E. S.....42, 212
Hints on the Popular Study of Astronomy..... 151
Haynaldschen Observatorium.....159, 229
Holden-Proctor Unpleasantness...192, 230
Hough's Catalogue of 209 Double-Stars. 192
Hill, Chas. B.....195, 291, 362
Hall, Asaph..... 297

I

Intra-Mercurial Observations.....196, 229
Iowa College Observatory..... 322

K

Kirkwood, Daniel.....77, 116, 169, 248
Kepler's Correspondence in 1599..... 109, 133, 158, 212
Keeler, James E..... 233

XUM

L

Lalande 4219 80
Leavenworth, F. P. 81, 294
Lick Observatory 86, 295
Lick Telescope Object-Glass 87
Life and Achievements of Alvan Clark. 250
Lake Forest University Observatory .. 321

M

Mathematical Tables 44
Motion of the Lunar Apsides 49, 82
Muller, Frank 84, 323
Meteorits, Meteors and the Shooting Stars 65, 72, 98, 127
McFarland, R. W 118
Monck, W. H. S. 57, 194, 222
Magnitudes of Stars for Nautical Almanacs 292
Michaelson, Albert A 306
Morley, Edward W 306
Morrison Observatory 324

N

Nebulæ, McCormick Obs'y, List of 43
New Variable in Orion 85
Newton, H. A 65, 72, 98, 127
New Observatory of Carleton College.. 220
New Method for Time and Azimuth... 224
New Red Star near 26 Cygni 224
New Minor Planet (266) 231
Note from Mr. Proctor 259
New Work on Astronomy 270
Note on G. C. 4333 293
New Repsold Meridian Circle 302
New Mode of Determining the Constants of Refraction and Aberration. 310
New Catalogue of Stars 352

O

Occultation of *a* Tauri 45
Origin of Comets 77
Optical Appearances of Comets 89
Occultations of Stars by Dark Limb of Moon 162
Occultations of Stars in the "Hyades". 163
Occultation of Aldebaran 195
Origin of Nebulæ 225
Orientation of Photographic Plates.... 230
Observations at Chabot Observatory... 290
Orbit of Σ 1757 (Gore) 328
Observing Nebulæ at Leander McCormick Observatory 361

P

Photographers *vs.* Old Fashioned Astronomers 1
Parkhurst, Henry M 85, 119, 353
Planets 88, 321
Porter, J. G. 95
Public Parks and Scientific Institutions. 162
Phythian, Capt. R. L 166
Phenomena of Cooling Envelopes.... 170
Pres. Holden's Reply to Prof. Proctor. 210
Photographic Study of Stellar Spectra. 222
Proctor, R. A 262, 270
Progress of Astronomy during the Nineteenth Century 350
Photometric Observations of Asteroids. 353

Q

Queries from Recent Letters 44

R

Rockwell, C. H 87, 326
Richardson, Miss L. H 133, 212
Recent Showers of Meteors 160, 287, 356
Right Ascension, Declination and Terrestrial Longitude by Sextant Observations 175
Relation of Aerolites to Shooting Stars. 248
Recent Stellar Photography 58
Rejection of Discordant Observations. 297
Relative Motion of the Earth and Luminiferous Ether 306
Representation of Comets' Orbits by Models 329
Report of Leander McCormick Obs'y.. 363

S

Stone, Ormond 1, 43, 73
Surveying, Theory and Practice of 47
Smithsonian Review of Astronomy 83
Swift's Fifth Catalogue of New Nebulæ 83
Swift-Watson Intra Mercurial Observations 84, 117
Sun-Spots 88
Sun-Spots as Vortex Rings 139
Star Spectroscope for Great Equatorial of Lick Observatory 157
Second Centennial of the Principia.... 217
Star of Bethlehem 265, 360
Schaeberle, J. M 324
Supposed Satellite of Venus 360

T

Ten Years' Progress in Astronomy 4
Tracing the Fixed Stars 43
Telescopic Illumination 73
Themes in Foreign Astronomical Journals 75
Time 95
Total Solar Eclipse of August 19, 1887, 105, 262, 292, 323
Temporary Stars 118
Treatise on Algebra, Oliver, Waite & Jones 167
Treatise on Trigonometry, Oliver, Waite & Jones 168
Time Service of Lick Observatory..... 233
The Yale College Measurement of the Pleiades 254
The Scientific American 362
The Asteroids 363

U

U. S. Naval Observatory 79, 165

V

Variable Stars for June 321

W

Winlock, W. C 112
Warner Observatory 119
Wilson, H. C 121, 219, 262, 359
Wendell, O. C. 161, 360
Work of Theodor von Oppolzer 188
Warner Prizes for 1887 225
Warner, H. H 226
Washburn Observatory 326
Warner Observatory 364

Y

Young, Professor C. A 4, 117
Yarnall's Catalogue 81

XUM